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Original.

CASE OF GUNSHOT WOUND OF LIVER AND LUNG.

BY THOMAS S. K. MORTON, M. D.,

Philadelphia.

A boy, aged nine and a half years, was admitted to the Pennsylvania Hospital, September 11, 1894, with a history that he had been shot by a 32 calibre revolver at short range, but a few moments previously. I saw him almost at once after admission, and found a bullet wound one-and-a-half inches below and half an inch to the left of the ensiform cartilage. He was not especially shocked. Was said to have vomited considerable blood, and complained of great pain in the epigastrium. Abdomen not distended.

Ether was administered and perforation of the abdominal cavity proved by enlarging the bullet wound slightly and passing a probe. Having thus made certain that the peritoneum has been entered, an incision was made in the median line from the ensiform cartilage downward for four inches. Upon laying open the peritoneum much fluid blood and some large clots flowed out. It was found that the ball had passed through the right lobe of the liver, two and-a-half inches behind the anterior margin, then emerged just above the gastro-hepatic omentum, had almost totally destroyed the lobus spigelii, then had torn a large hole in the lesser omentum, again perforated the peritoneum, struck the first lumbar vertebra, and became lost. Blood welled up in large quantities from the posterior peritoneal opening, mostly venous, but partially arterial. A finger tip only could be passed into this wound. There was no wound of stomach or intestines. The wound of the right lobe, as well as that of the spigelian lobe of the liver, was not bleeding. A column of iodoform gauze was carried down so as to block the wounds of the lesser omentum and posterior layer of the peritoneum, and at the same time to press upon the mutilated spigelian lobe and posterior or exit wound of the right lobe of the liver. The packing was continued and brought out through the parietal wound. The wound of entrance into the right lobe was not interfered with. The abdominal wound was now closed around the gauze drain after copious irrigation of the surroundings with hot salt solution. As it was suspected that much blood had gravitated into the pelvis and lower portions of the abdomen, which could not readily be washed out by irrigation from above, it was determined to make a small opening above the pubis for that purpose and to put in a drain-tube. Accordingly a half-inch incision was made just above the symphysis, and much fluid blood and clots were washed out through it by means of a long irrigator tube. A glass drain was carried through this wound down to the bottom of the pelvis, to serve as an index should further hemorrhage take place into the abdomen. But, despite all efforts to the contrary, the lad died in a few hours.

At the post-mortem examination it was discovered that the ball had passed between the aorta and vena cava, and perforated the right crus of the diaphragm before striking the first lumbar vertebra. In the latter it cut a large groove, and was deflected upward and

outward through the pleura, and into the substance of the right lung, where it was found imbedded. The lower lobes of this lung were distended by blood, and over a quart in addition filled the pleural sac. No wounds of other viscera were discovered. There was no blood in the abdominal cavity.

Upon careful inquiry after death I ascertained that the reported vomiting of blood had been incorrect; that in reality he had coughed up and not vomited it. No special examination of the chest was made before operation, and no signs appeared to call attention to that locality. But the bleeding thereinto was unquestionably the immediate cause of death. Had the ball not wounded the lung I believe that the boy would have had a very good chance of recovery afforded him by the operation.

EHRLICH'S TEST FOR URINE TO DETERMINE TYPHOID FEVER.

BY F. W. FRANKHAUSER, M. D., READING, PA.

In presenting this paper on Ehrlich's test for urine in typhoid fever, I know I am in a measure treading on untrodden ground, but as you are all aware, it is only by some truths falling into disuse and finally being brought forth again that some of our great facts in medicine have come to stay. I can do no better than to quote from a paper* of Prof. Charles Green:

*Journal of American Med. Association, Feb. 24, 1894.

"More than ten years have elapsed since Ehrlich announced the discovery of an urinary test that would determine the presence or absence of typhoid fever.

"The importance of such a discovery, if genuine, makes this apathy seem at first glance almost inexplicable, but reference to the literature upon the subject offers a ready and sufficient explanation.

"It would seem a very easy matter for scientific observers to arrive at harmonious results in the performance of a simple experiment, terminating in a definite color reaction, yet we find in the published accounts of these observations statements so contradictory and confusing as to lead one to believe that scientific accuracy in this department at least is little better than a name.

"Carelessness in diagnosis and utter disregard for the instructions of Ehrlich, as to the manner of making a test, account in a considerable measure for the discrepancies of statement, but it is perhaps the failure to insist upon the appearance of the proper color in the reaction which has caused most of the error.

"As to the diseases in which the reaction occurs, one can only say that the reports of the most careful and scientific observers, including Ehrlich himself, show the reaction to be present in typhoid, pulmonary tuberculosis, and the exanthemata, while other observers have reported it as being present in practically every disease known to the profession."

Professor Green reports the results of two hundred and fifty cases, of which there were in typhoid fever nineteen cases; relapsing typhoid fever, two cases.

Eighteen of the nineteen cases responded to the test; both relapsing cases responded.

Tuberculosis of the lungs, twenty-five cases; responded to test, twenty-three.

Tuberculosis of prostate, two; no response.

Tuberculosis of hip joint, two cases; both responded to the test.

Professor Green reports a number of other diseases, as well as twenty cases of normal urine, in which the urine did not respond to the test.

My first attention was drawn to the test in my readings about a year ago, when I noticed the name mentioned, but could find no literature, or any one who knew what it was, for nearly or quite two months.

Since that time I have been making a few observations, which to me have been very interesting.

No. 1. Female, age 28, third week of disease; temperature still ranging from 100 to 102 degrees; eruption present; no diarrhea; tongue coated, but moist; tenderness of right iliac region; some distension of abdomen; no delirium; urine responded to the test from this time until temperatunre remained normal.

No. 2. Female; end of third week, when the urine was first tested; temperature nearly normal, but urine responded

Read at the meeting of the Berks County Medical Society, November 13, 1894.

to test until temperature remained normal.

No. 3. End of second week, when the first test was made; eruption present; no diarrhea; some distension of abdomen; no delirium; temperature ranging from 101 to 103; responded to test daily, until the temperature remained normal.

No. 4. Male; from an infected district; abdominal tenderness; characteristic temperature; no diarrhea; sordes; tongue coated; urine responded to test from the third day of disease to about the twenty-third, when the temperature remained normal for six days. Then there was a relapse, when the urine again responded to test, until convalescense was established.

No. 5. Female; from same infected district, where five others in the family were sick with typhoid fever, and three persons who were employed at said place. As early as the third day of disease urine responded to test, and continued until convalescent.

No. 6. Husband of No. 5; who had same symptoms of typhoid fever, but whose temperature never rose above 100 degrees, and then only for a few days; whilst he was under observation for three weeks. The urine did not respond to the test.

No. 7. Sister of No. 4, who had an attack of typhoid fever; during a relapse was under observation for the test when the urine responded until the temperature remained normal.

No. 8. A case of relapsing typhoid fever; possibly due to indiscretion in diet; temperature went up to 102 degrees. Urine responded to test, until convalescence was established, and temperature remained normal.

No. 9. From same infected district; had typhoid fever with nearly all the symptoms present; responded to test.

No. 10. Case of typhoid fever; temperature went up to 104.5; when three cold sponge baths of half an hour duration were necessary with antipyretics to keep the temperature near or within the bounds of 102 degrees; delirious, and periods of unconsciousness; urine responded to test from end second day of disease until temperature remained normal.

No. 11. Case came under observation at about the fifth day of disease; urine responded to test until death, about the sixteenth day of disease.

No. 12. With all the symptoms of typhoid fever present, temperature rising to 104; urine continued to respond to test until patient was relieved by death.

No. 13. Case of typhoid fever as a sequela of scarlet fever; temperature rising to 102.5; urine responded to test until temperature remained normal.

No. 14. A Swede suffering from phthisis in the third stage, responded to test until death.

No. 15. Male, 55 years of age; third stage of phthisis, urine responded to test.

No. 16. Male, stonecutter by trade; insipient phthisis; no response to test while under observation.

Now, while this report is not as full or complete as it might be, as these tests may respond to some other diseases, which is a point not definitely settled, and there is no other sign or symptom that is always present, it is the grouping together of the different symptoms that aids us in making our diagnosis, and often I am sure it is several days or more before we can fully diagnose typhoid fever from other disease.

If, as it has been stated by some writers, the test does not respond to any other disease than typhoid fever or the last stage of phthisis, where no one could fail to make a diagnosis by exclusion, then it will be the only positive point in diagnosis that we possess.

If it shows the reaction before the eruption has appeared, which has been shown in several instances where the urine responded to the test before the corruption could be present, it will be a valuable sign. Should it prove a failure it is only what many other signs have done, and we all know it is only by gleaning the signs that are most frequently present that we arrive at a conclusion.

The solutions required and manner of application for the test are as follows:

Solution No. 1:

Acid hydrochloric, c. p., 50 parts; aquae destil., q. s. ad., 1000 parts; sulfanilic acid ad saturatum.

Solution No. 2:

Sodium nitritis, 2½ grains; aquae destil., 1 ounce.

Test solutions:

Solution No. 1.—40 parts.

Solution No. 2.—1 part.

Equal parts of urine and test solutions mixed in solutions. Smear two c. c. ammomia water down the sides of the test-tube, so as to overlay the mixture.

If the reaction be present there appears at the point of contact a beautiful carmine or blood-red.

Here is where the difference of observers occurs. It is not an orange or a yellow that occurs, but a blood red.

Again, it is not all of the solution that shows the reaction, but simply a band or belt at the junction.

In my observations I have used the following solutions a little different from the first solutions named:

Solution No. 1—Acidum hydrochloricum, 72 minims; acidum sulphanilicum, 10 grains; aquae destillata, 3 oz.

Solution No. 2—Sodium nitrite, 2½ grains; aquae, 1 oz.

Test solution—Twenty-five (25) min- No. 2; patient's urine, twenty-six (26) ims of No. 1 solution; one (1) minim of minims.

Add aquae ammonia q. s. to make the solution alkaline, when the belt will appear of a dark blood red.

If phosphates are present in abundance, acetic acid, a few drops, will bring out the reaction.

Dr. Greene reports 19 cases; responding to test, 18.

I have reported 11 cases; responding to test, 11.

Relapsing typhoid, 2; cases responding to test, 2.

Is there any symptom or sign that is present in nearly as many cases, or are there any signs upon which we can lay as much stress as we can in this, provided the tests will bear the same relations in the future?

I have found, and no doubt you all have, that even the characteristic temperature is not always present. Neither is the abdominal tenderness, or the distension, or the diarrhea always present. The eruption, which does not make its appearance until the seventh day, is absent in about 20 per cent. of the cases. Diarrhea may be present in half the cases.

The characteristic bacillus does not give to us the aid or help that we might desire or expect. It is admitted by eminent bacteriologists that none but experts can with any degree of certainty distinguish them from many others that often are present.

In our test observations let us reject all but a red band or belt, and not except the orange and those where all the solutions turn of a reddish color.

In my future tests I may change the solutions some, so, if possible, not to give any reaction whatever in normal urines.

DISEASES OF THE ALIMENTARY CANAL—TREATMENT.

INTERNAL AND EXTERNAL HYDROTHERAPY—MEDICATION.*

BY JAMES OSBOURN DECOURCY, M. A., M. D., ST. LIBORY, ILL.

Cleanliness is said to be next to godliness—a very old adage which I have found to be no less true in the treatment of all diseases which have come under my observation. It is my custom to first make clean my patient, outside and inside, so far as practicable, by the free use of pure water and good soap. I have never seen or had a bad result from the use of these agents. I am of the opinion that in many cases all the medicine that is needed is the free, judicious use of water, abstinence from food, plenty of pure air and sunshine.

These agents, together with clear conception and observation of the laws of hygiene, will figure very conspicuously in the future of medicine.

While I am a strong advocate of the free use of water in the practice of medicine, I also have confidence in the therapeutics of drugs, and as I believe, have seen many good results from the intelligent use of them.

In the treatment of disease there are three distinct steps. They are: 1, a correct diagnosis—ascertaining the cause; 2, absolute cleanliness by irrigation internally and the free use of water externally, and by the use of disinfecting agents; 3, repair the damage—heal the wound—restore nature—rather assist nature in her work of reconstruction. This should be done by the skillful use of tools best adapted to the work to be done.

In treating diseases of the alimentary canal generally, and in the three following cases which I report to you, I have endeavored to follow the foregoing principles. My results are all that could be desired. They have been both interesting and profitable to me, and I trust they may be of some interest to this society.

Case 1.—Miss Mary; aged 29; American; fawn type; medium size and rather stout; was taken at night with pain in

*Read before the St. Clair County (Ill.) Medical Society, June 7, 1894. Extracted from the Journal of the American Medical Association.

lower bowels, followed by watery stools.

I was called in the early morning, March 15. Found her excited and suffering very much pain in the bowels; also complained of severe headache. Temperature was slightly elevated. Pulse regular, but rapid and weak. She gave history of having had several severe attacks of ulcerative colitis, during one of which she came very near to death's door.

There was some tenderness on palpation and percussion over the major part of the abdomen, and the bowel was very active in evacuating itself. The stools were thin, and contained mucus with a little blood. When food was taken into the stomach, especially milk, it was usually ejected in curdy masses within a few minutes.

The usual agents were used to abate the pain, to check the vomiting; also to restore the bowel to its normal condition.

The pain was greatly reduced, and the rebellious condition of the stomach almost entirely overcome; but the bowel persisted in its active work of draining the system. The stools became offensive, containing more blood and mucus.

A portion of the lining membrane of the intestine about eight inches in length was passed with the feces the fourth day. Having a four-ounce bottle of glycozone, I concluded to try it. So other internal agents were discontinued, and 2-drachm doses of glycozone given every four hours in a wineglass of water. The bowel was washed out morning and evening with warm soap water, followed by an ounce of tepid water containing a half drachm tincture opium.

At the end of the first day after beginning the last method of treatment there were marked signs for the better; and the patient expressed herself as feeling less bad. The treatment was continued with constant improvement in the case until the glycozone was all taken, at which time the bowel and stomach were under good control. Pain all gone; and after a few days of convalescence the patient made a perfect recovery without any further treatment.

Case II.—Ely, aged 22, medium-sized man, general health uniformly good; a blacksmith by trade. First saw the case with Dr. S. at 4 P. M., March 30.

On arrival at bedside of patient I found him in what seemed to be a semi-comatose state. The odor of whisky was very marked. Examination of the matter ejected showed it to contain blood and mucus.

A few drops of chloroform with cold water were given, and a cold pack placed over the epigastrium to check the vomiting. The following powders were given to quiet the stomach and to move the bowel:

R Calomel .....gr. 8.
Podophyllin .....gr. 2.
Subnitrate of bismuth ..gr. 12.
Bicarbonate of soda ....gr. 4.

M., Pulvis, No. 4 Sig.—Dose, one powder every hour.

The father, mother and wife of the patient gave the following history:

"For the last five years the patient has been drinking whisky, and for the last two years, in particular, he has been drinking too much. Last October he had an attack somewhat like this, but recovered in about one week.

"His general health has always been good. He has been drinking too much every day for a week now—keeping his whisky in his shop. He was well this morning. Worked in the shop until noon. Ate a hearty dinner, but was taken sick soon after eating and in a short time began to vomit."

Called again at 5 P. M. Found him quiet, but suffering. Left some Dover's powders to be given during the night if necessary.

At 2 A. M., March 31, was called again. Found him excited and suffering very much. Quick pulse and slight elevation of temperature. Gave him hypodermic injection:

R Morph. sulph. .....gr. ¼.
Atropin .....gr. 1-150.

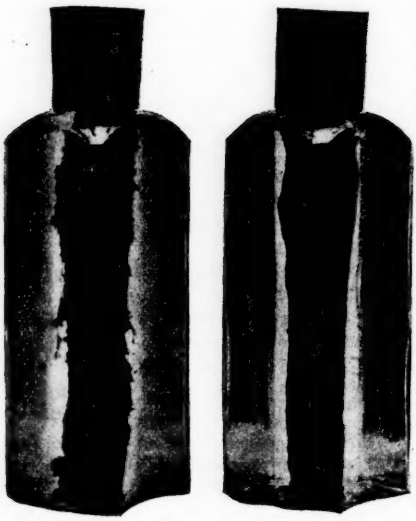
His wife gave history of his vomiting at irregular periods until 10 P. M., after which time nothing would pass either up or down. Impossible to swallow water. Upon careful inspection the whole mucous membrane lining the mouth and throat as far as could be seen was in a state of hypertrophy. Indeed, it was simply cooked. (Pardon the use of the word, cooked; but it expresses the condition.) The stomach also was in a state of inflammation. What was to be done?

Internal medication and alimentation was out of the question. Recognizing the emergency of the case, I determined, if possible, to dissolve the mucus about the affected parts, and to

attempt to reduce the edema of the membranes.

The nose and throat, therefore, were sprayed every twenty minutes for awhile with Hydrozone and a 20 per cent. solution of the same used as a gargle every hour, until he could swallow water, which required forty hours. An enema of warm soap-water was given and repeated, which produced a soft stool; and he expressed himself as feeling better.

The spraying of nose and throat, together with the gargle, also the enema, were continued every day. The inability of the patient to swallow made alimentation by the stomach impossible, to say nothing of the inability of the stomach to perform the work of digestion. Boiled milk and warm soups were regularly given in small quantities by the rectum.



"A" "B"

Photograph of the mucous membrane expelled from the Esophagus of Ely. Cut "A" illustrates the ragged surface of the membrane as torn from the muscular coat of the tube.

Cut "B" illustrates the smooth surface of the same membrane over which food was passed, the membrane being turned inside out, just as when expelled. The size of these cuts is two-thirds of the photograph of the Esophagus. The cardiac end of the membrane being at the bottom of the cut in each case.

On the morning of April 7 the whole lining membrane of the esophagus was expelled in the attempt to vomit. The membrane was neither broken nor perforated; but was turned inside out. I have preserved the specimen in an alcoholic solution; and take pleasure in presenting it herewith for your inspection and examination.

There was some fever most of the time, the temperature running up as high as 102. The pulse varied from normal to 90, and a few times went up to 100.

The general condition of the patient was fairly good—indeed, much better than could have been expected.

There was very little headache, but a lancinating pain in the left hypogastric region was greatly accelerated by coughing, and there was more or less tendency to cough during the first week.

I might state here parenthetically that, in my judgment, the trouble in the side had no connection with the condition of the mouth, throat and stomach; but, on the contrary, was entirely and wholly independent of it.

The history given of the case showed the last-named trouble to have been produced some five years ago by prolonged arduous labor in which the abdominal muscles were in a constant strain for hours, since which time the trouble has returned at different periods; and almost invariably following protracted, or great straining of the muscles in that region. The treatment given was palliative.

The odor coming from the mouth of the patient was offensive from the first, and continued to grow more and more offensive until after the expulsion of the membrane.

The kidneys performed their work admirably well. The stools which followed the enemata of warm water were rather soft and of a greenish color.

There were no hallucinations, no delirium; and for the most part sleep was good.

To prevent septicemia, to assist nature in the work of reconstruction, as well as to counteract any miasmatic influence that might be present, the following preparation was given:

R Quininæ sulphatis.....scr. 2.
Acidi sulphurici aromatici..dr.1½
Aquæ camphoræ,
Aquæ destillatæ, aa.....oz. 2.

M. Sig—One dessertspoonful every two hours, being alternated by half-drachm doses of hydrozone, 20 per cent. solution, given in a third of a glass of water.

Gradually, but slowly, the condition of the patient grew better, with the exception of one day, at which time he had no hydrozone. The other medicine "Would not work without the gargle," as he expressed it. "But worked well together."

Immediately after resuming the use of hydrozone he began to feel better. Saw him April 9. Found him in good condition. Pulse and temperature normal. Expressed himself as feeling very well.

He had been sitting up most of the time for several days. I recommended that the treatment should be continued for some time.

A week later his wife called at my office, stating that she thought he was doing very well. Since which time I have had no official report from the case.

My candid opinion is, that of all the agents used, the one to which he owes the preservation of his life during the first seven days of the attack is hydrozone.

Case III.—Bennie, little boy, aged 9 years, orphan, German, was brought to my office May 20. Had diarrhea, which had become chronic. Also had intermittent fever—mild form. He was very much reduced in flesh and emaciated.

Various and numerous agents from the list of ordinary remedies were used during the four succeeding days; but the diarrhea was growing worse rather than better. The stools became very numerous, the actions amounting to ten or twelve at night, with as many more during the day. The malarial fever received appropriate treatment and was readily subdued.

May 26 I planned a new treatment. The patient was thoroughly sponged from head to foot once a day with tepid alkaline water. The bowel was washed out clean morning and evening with soapwater, just warm enough to be comfortable to the patient. After the bowel was washed out, two ounces of starch water containing two drachms of glycozone was thrown into the rectum, and left to be absorbed. The internal treatment consisted of a milk diet, fresh water to drink impregnated with hydrozone, and dessertspoonful doses of glycozone taken every two hours during the day in a wineglassful of fresh water.

Improvement began with this treatment. The skin and bowel were kept thoroughly cleansed every day as well as medicated, the bowel being irrigated twice each day. June 4 the child was reported well. His general health is rapidly improving.

Good or bad, this treatment is purely original with me.

What effected the cure? My answer is this:

1. Removing the cause. This was done by abstinence from all solid food. Aliment was restricted to small quantities of pure, fresh milk, beef and chicken soups, given at regular periods.

2. By cleansing the affected parts, as before stated.

3. By healing the wound. This was done by the use of glycozone, which I have found to be one of the most reliable and rapidly-healing agents that I have yet used. The hydrozone was used as a disinfecting agent.

May we not reasonably expect that during the remainder of the present decade, and for all time to come, internal as well as external cleanliness shall be to suffering humanity a boon—an heavenly unction?

Note—I have, for some time, substituted hydrozone in my practice instead of peroxide of hydrogen as formerly used.

Hydrozone is "double strength" hydrogen peroxide—so to speak. In other words, it has twice the bactericide power, and, therefore, requires only one-half the quantity to accomplish the same results.

It is not disagreeable to the patient when taken internally, if well diluted with pure fresh water.

ONE CAUSE OF LEAD POISONING.

A lady of Evergreen, O., died last week from the effects of rain water which she drank. The water was caught from a roof that had recently been painted with white lead.

Mr. Edwin Ginn, of Boston, who seems to have done more business investigation of the tenement house question than any one in that city, says that the investment of $4,000,000 or $5,000,000 in the erection of such buildings would go a long way toward abating present evils and would pay 6 per cent. on the capital. The men who would fight the scheme are those who get 50 per cent. on their money, and who contribute every facility to increasing the city's death rate, he says.

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PHILADELPHIA, NOVEMBER 24, 1894.

THE ACTION OF THE PHILADELPHIA BOARD OF HEALTH REGARDING THE MILK SUPPLY OF THE CITY.

At a meeting of the Philadelphia Board of Health, October 10, the following resolutions were passed:

Whereas, It has been decided by competent authority that physical examination alone is an uncertain and, therefore, unreliable means of determining the freedom of cattle from tuberculosis; and

Whereas, The tuberculin test is the only means of detecting many occult cases of this disease, and is, therefore, indispensable in arriving at the knowledge that a herd of cattle is free from tuberculosis; therefore,

Resolved, That the Chief Inspector of Milk be and is hereby instructed to indorse as untrustworthy all certificates of the freedom of herds of milch cows from tuberculosis that are not based upon the tuberculin test by trained veterinarians.

Resolved, That the Chief Inspector of Milk keep a book in which shall be registered all herds of milch cows that supply the city of Philadelphia that have been certified as free from tuberculosis by the method approved by the Board of Health; also of such as have not been reliably certified, and which are therefore "suspicious," which records shall be open to the inspection of the public; said records shall contain the names of the dealers supplied by such herds.

Resolved, That all producers of milk supplying the city of Philadelphia who fail after sixty days' notice to furnish a certificate or clean bill of health of their cattle, based on the method of examination demanded by experts and approved by the Board of Health, shall be reported to the board, and be liable to have their milk rejected as being "suspicious."

The step taken by the Board of Health as embodied in these resolutions is a radical one which, we believe, is not warranted by facts. It may be true that cattle are great sufferers from tuberculosis and a source of danger to persons, especially infants, who may partake of tuberculous milk, but, from the fact that a person may swallow colonies of tubercle bacilli without becoming infected with the disease, have we the absolute proof that milk from cows responding to the tuberculin test necessarily will infect the consumer?

Is there no other element necessary which may be resident within or without the individual on which the tubercle bacillus must depend for its development outside its mere existence in milk?

Can anyone prove that an animal which has been subjected to the tuberculin test for this disease will positively not contract tuberculosis from the injection?

Do results warrant the wholesale endangering of a herd of cattle to the ravages of tuberculosis by the employment of these injections of tuberculin, which in our humble opinion is far from being devoid of danger?

The fact seems well established at the present day that persons may swallow whole colonies of tubercle bacilli without endangering themselves to the disease; hence, some other element must

be at least a factor in the production of the disease, either as the primative cause or the agent on which the tubercle bacillus may depend for its developing tuberculosis.

There are a great many authorities at the present day who are of the opinion that the tubercle bacillus is a product of tuberculosis, as the seed may be the product of the plant or flower. Indeed, in one sense, few can doubt it. That the tubercle bacillus needs fertile soil is also a recognized fact, but that it also needs a something else, as the seed needs sun and air to become a plant, seldom enters the popular mind.

Another question in connection with this action of the Board of Health would naturally arise, viz.: Is the milk of cows that respond to the tuberculin test, but show no other signs of the disease, objectively or microscopically, dangerous to the healthy human being? In other words, is not consumption dependent on a lymphatic dyscrasia, an altered condition of nutrition, in which the fatty elements of the blood have suffered and hence offer a fertile soil for the tubercle bacillus?

Again, if the State is willing to pay a fair price for the animals which are destroyed on their responding to the tuberculin test, or which subsequently develop tuberculosis, caused by the injection, then we would say that there could be no serious objection to the employment of this method of testing herds, except as it encroaches on the legitimate trade of the registered veterinarian.

Could the residents of any large city be absolutely sure that they were treated to only the best milk obtainable, free from dilution, germs or dirt, it would be one of the greatest blessings to humanity to raise the price to correspond to the extra labor entailed for its production and give a fair profit. We believe that this assurance is given by several dealers in Philadelphia, and other large cities, and are glad to recommend such to the profession who seek pure milk for infants and invalids, but it would be vastly more beneficial if such well-conducted dairies were more general.

"PLEASE DROP NEWSPAPERS HERE FOR THE SICK IN THE HOSPITALS."

Has anyone who is connected with the hospitals and who is more or less acquainted with the subject of infection been past one of those charitable boxes intended for the good of the unfortunate sick in the hospitals, and considered what a prolific source of contagion newspapers deposited in them may become?

Placed, as these boxes are, on the street corners, in the railroad stations and in other public places, they are intended for the reception of newspapers and other reading matter, donated by kindly persons who have finished reading them.

Along comes a man with a hand inflamed by an erysipelatous lesion and deposits his paper in the box; next comes one who has been coughing tuberculous bacilli into his open sheet all the way to town in the train. He folds his paper carefully, inclosing the bacilli, and donates them as his charitable offering to the sick in the hospital.

This is not all; the ever-faithful pus germ, or the scarlet fever coccus, or the diphtheria bacillus, or even a stray smallpox microbe may find its way into the box of papers for the benefit (?) of the sick poor.

We do not know what kind of a reception these germs may meet in the hospitals before they are distributed to the patients, but what a jolly time they must have together in these boxes! (sic.)

Would it not be a worthier plan for the various newspaper managers to donate a few clean sheeets to the various hospitals of the city, every morning or evening, than to run the risk of allowing so much infection to be carried to the sick whom the city is supposed to cure?

THE DIPHTHERIA ANTITOXIN TREATMENT IN THE MUNICIPAL HOSPITAL IN PHILADELPHIA.

Five case of diphtheria have recently been treated in the Municipal Hospital of this city, with the ultimate result that the first one died and the other four recovered.

In every case the diphtheria bacilli were proven to be present, and the only question that can be raised against the success of the serum treatment is that the cases were also treated in the usual way by applications of tinct. ferri chlor. and bichloride of mercury. In view of the latter treatment it is impossible to

know how much of the success of the cures was due to the serum alone.

In one or two of the cases there was marked dimunition of the exudate after the injections were made. The serum used was that of Behring's, and also that of Aronsohn's, which is more concentrated.

Locally, formalin, in one per cent. solution, alternated with the peroxide of hydrogen, was used.

The ages of those operated on were from two and a half to 13 years.

THE TREATMENT OF SURGICAL TUBERCULOSIS BY HOT WATER.

Dr. M. Jaeunel, in La Semaine Medicale for October 3, 1894, gives an interesting account of his success by the use of hot water in tuberculous abscesses and in lesions of the bones and articulations. The technique is described as follows: "After having a tuberculous cavity cleared, the fistulous tracts are freely opened, the soft parts, bony elements or diseased joints are thoroughly curetted. All caseous, fungous material being cleared away, the part is sponged dry and all bleeding controlled. Now the parts are rinsed freely with sterilized water and again dried. Then, through a narrow tube, a small quantity of boiling water is injected. When the cavities are filled they are drained and filled again, until the affected tissues are thoroughly cauterized."

Another method of applying this method—par l'ebouillantement—is to fill the cavity with warm or cold water, then immerse for a moment in it the tip of a thermo-cautery iron, red hot. One teaspoonful of water so boiled will suffice for an abscess as large as a pullet's egg.

The pain is so acute that general anesthesia is usually required, though for a local superficial lesion cocainization will suffice.

For a time reaction is intense, but usually after the first day all pain passes off. For a few days succeeding the operation there is an abundant discharge of fluid detritus and serous matter, necessitating the frequent change of dressings. Union is usually rapid and the cure permanent.

Boiling water in certain cases is to be preferred to the dry cautery, because of its greater penetrating action and ready accessibility.

THE REPORTS OF THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

We trust our readers appreciate the excellent and untiring work which has been given to the reports of the recent meeting of this association by our able editor in this department, Dr. Monell, of New York.

These are the most complete reports which have been published of the most important event of the year in medical electricity, and represents a vast amount of literary work, valuable, not only to the electro-therapist, but to the general practitioner as well.

We wish it also borne in mind that no journal in the country has during the past year published such material on electro-therapeutics of value to the general practitioner as the "Times and Register—a point which we wish our subscribers to bear in mind in renewing their subscriptions, as well as recommending this journal to others.

SUNLIGHT AS A GERMICIDE.

A writer in the last issue (November 10) of the New York Medical Record thinks he has discovered a new germicide in the sun's rays, stating that they will arrest decomposition and destroy microbes at a temperature of 110 to 120 Fahrenheit. There is nothing especially new about this. It has long been noted that the sun's rays were one of the best disinfectants we have, and had the advantage of being plentiful and cheap. We doubt, however, if this means of disinfection is as much employed as it should be.

Correspondence.

MIXED ANESTHESIA.

The article in the November 10th issue of your journal on mixed anesthesia reminds me of my long experience in surgical operations and especially during the war, when we operated quite often, always using chloroform, but gave the patient nearly two ounces of whisky about half an hour before chloroform and never had any trouble from heart failure.

Yours,

O. D. NORTON, M. D.,
Cincinnati, Ohio.

Surgery.

Under the charge of T. H. MANLEY, M. D., 115 W. 49th St., New York.

EXPLORATORY OPERATION IN CANCER OF COLON.

After anesthetizing patient, incision two and one-half inches long is made in linea alba, between umbilicus and symphysis pubis, assistant preventing escape of any coil of intestine. The fingers are then carefully introduced into the right iliac fossa and condition of cecum ascertained. If this be distended right iliac fossa is explored, and condition of sigmoid flexure ascertained. If distended, its course is gently followed into the pelvis and seat of obstruction ascertained. Should sigmoid flexure be empty, it is followed upwards by the fingers, and descending colon traced to splenic flexure. The collapsed gut may, in favorable cases, be followed along the transverse colon to hepatic flexure, but is dangerous and difficult if much distension be present. When cecum and sigmoid flexure are distended, left inguinal or lumbar colotomy may be practiced; when cecum is distended and distending colon collapsed, right colotomy only. Chief advantages of this method: It will occasionally prevent unnecessary opening of colon, obstruction being found due to ovarian or uterine tumor, easily removable, or to adhesions or dissemination of cancer; it will prevent incision of left and then right loin.

—J. Bland Sutton, Clinical Journal, August 15, 1894.

THE TREATMENT OF CYSTITIS BY INSTILLATIONS OF BICHLORIDE OF MERCURY.

Colin reports thirty-four cases treated by sublimate instillations. Twelve were cured, nine greatly improved, nine improved, while no change was noticed in the remaining four. The good results noted in cases of ordinary cystitis have been likewise seen in cases of tuberculosis and gonorrhea of the bladder.

In the tubercular variety of cystitis the instillations give almost immediate relief from pain and tenesmus.

The instillations are to be made by Guyon's method. At first the injections should be made at intervals of two days, but later every day, and the strength of the solution gradually increased.

The strongest solutions required are 1-1000 to 1-500.

As to the quantity of fluid that should be injected, the author recommends five to ten grammes should be injected into the bladder, and ten to fifteen drops should be deposited near the neck of the bladder and in the posterior urethra.

Guyon, in 1891, made some experiments as regards the strength of a bichloride solution that could with comfort be injected into the bladder. He found that when the bladder was irrigated with a solution stronger than 1-4000 there was great pain and tenesmus. If, however, the solution was used in much smaller quantities as strong as 1-500 might be used without any disagreeable after effect.

—These de Paris, 74 pp., 1894.

CASTRATION AS A REMEDY FOR ENLARGED PROSTATE.

Women have long had almost a monopoly of the sensation of being unsexed, thanks to the enterprise and valiant skill of the gynecologist; but now the general surgeon, despairing of having castration of men adopted by law as a punishment for crime, has recommended it as a remedy for disease. Professor Ramm, of Sweden, performed the operation twice in 1893, for enlarged prostate. Haynes, of Los Angeles, three times; Fremont Smith, of St. Augustine, once; White, of Philadelphia, once; C. Mansell Moullin, of London, once. That well-known writer, in the British Medical Journal for November 3, advocates the operation in desperate cases, and states that it is invariably followed by disappearance of the enlarged prostate.

The crop of eunuchs, heretofore not very great in this country, may now be expected to increase with surprising rapidity, as our home talent is certainly not less bold than that of foreign nations, and no matter how dull the practice may become, American surgeons' knives are quite sharp enough to produce any number of sans testicules that may be demanded by the fantastic fads of the times.

—Journal of A. M. A.

Ophthalmology.

Under the Charge of J. A. TENNEY, M. D., 2 Commonwealth Ave., Boston.

THE PLANE MIRROR.

At the last meeting of the American Ophthalmological Society Dr. B. Alexander Randall made a plea in favor of the plane mirror in retinoscopy, employed at a distance from the eye of from one to three metres. He claims that it is much more delicate when used in this way than the concave mirror, so that he can detect differences of one-fourth or even one-tenth dioptres. He has an ample source of light, with a sight-hole in the mirror of sufficient size. The pupil should be at least three millimetres in diameter in order to make the test successful.

The writer is suspicious of ophthalmometers, optometers and retinoscopes, as far as accuracy is concerned. The retinoscope is invaluable in detecting the kind of difficulty with which we are dealing, and in astigmatism it will tell us better than anything where its axis lies, but such instruments are not reliable when we come to telling the exact amount of ametropia. The lenses are the best test. All other means are at best an approximation to the true result.

—J. A. T.

OCCUPATIONS AND AMBLYOPIA.

Mr. Simon Snell, F. R. C. S., has called attention in the Ophthalmic Record to various occupations that give rise to amblyopia. Workers in rubber are poisoned by the bi-sulphide of carbon, which is used as a solvent to carry the chloride of sulphur into the rubber in the vulcanizing process. A high temperature is now being used for the same purpose, so we shall hear less and less of poisoning from this source.

Dinitro-benzol, which is used in the manufacture of explosives, causes amblyopia, like the bi-sulphide. It affects the grinders and mixers of the material, and also those who fill cartridges.

Galezowski, in 1879, asserted that those engaged in the manufacture of explosives, causes amblyopia, like the bi-sulphide. It affects the grinders and mixers of the material, and also those who fill cartridges.

It is well known that lead is a fruitful source of eye troubles. Mr. Snell mentions in particular the occupation of file cutting as a means of lead poisoning. The file is placed upon a bed of lead, and every stroke liberates some of the metal, which is inhaled and otherwise absorbed. Optic neuritis and ocular paralysis are the most common consequences of this kind of poisoning.

Those who work where bright light is employed are said to be more liable than others to cataracts. Electric welders are obliged to wear a screen to prevent their being affected by the light. If their eyes are exposed to it, they feel the effect at once, but the worst effect comes several hours afterwards. The lids become swollen so they cannot be opened, and the pain lasts all night. It is supposed that the actinic rays are the source of injury in these cases, in which case dark ruby glass as a protection would be indicated.

J. A. T.

Book Notes.

DIAGNOSIS, DIFFERENTIAL DIAGNOSIS AND TREATMENT OF DISEASES OF THE EYE. By A. E. Adams, M. D. G. P. Putnam's Sons.

This little work of 86 pages contains tables of the diseases of the eye, with the differential diagnosis between them and other dieases with which they might be confounded. It is intended to help the busy general practitioner, who, not having had the experience of the specialist, needs something to which he can quickly turn and at a glance determine to what disease the symptoms in a given case belong. It is admirably adapted to this purpose, and is a valuable contribution to the handbooks for ready reference. J. A. T.

Electro-Therapeutics.

Under the Charge of S. H. MONELL, M. D., 44 West 46th St., New York.

THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

REPORT OF FOURTH ANNUAL MEETING.

THIRD SECTION.

Continued.

September 26.—The business of the meeting was continued by the committee's report upon static machines. In recommending that a machine should have not less than six plates of not less than 28 inches diameter it was intended only to eliminate toy machines, as small plates did not generate sufficient power for therapeutic purposes. Larger machines were, of course, superior to small ones, and in many cases were made to order for physicians who preferred plates of 30 to 40 or even 45 inches diameter.

Dr. Kellogg stated that he had employed a small machine for many years, and later obtained a regular size apparatus from the leading makers, which he used with better results. He, however, did not formerly regard static electricity with much favor, and his writings gave it a small place in his therapeutic work. Within a year, however, he had a New York firm make him a very powerful machine, with six plates, 45 inches in diameter. He is now much better satisfied with static electricity. In fact, was pleased with it and got four times as good results from it as formerly. He found its effects very marked. The excretion of CO^2 was increased during the static charge.

He recognized the value of increasing the power of the current, and for this purpose had a large drum made to surround the insulated patient and concentrate the charge.

The D'Arsonval transformer for producing a high frequency current from the ordinary static discharge lends additional interst to this apparatus, which appears to be only waiting for sufficient mechanical improvement to take its proper place in general use. Another fact disclosed at the meeting by Mr. Kennelly was that the static discharge was sinusoidal in character, while it has hitherto been represented as just the reverse.

No form of electricity has been more misunderstood than the static; a fact chiefly owing to the lack of improved inventions to produce it for convenient therapeutic use. Its merits is indisputable. Inferior machines have done much to injure its reputation in the past, but excellent static machines are now obtainable.

A report on the treatment of urethral stricture by his own method was next read by Dr. Newman.

Former reports were referred to and confirmed by sworn statements from several sources. Having practiced his method for over a quarter of a century Dr. Newman declared that "failures were due to individual causes, and did not invalidate the method." Some discussion arose over the question of steel sounds versus the Newman sounds, but Dr. Newman so convincingly advocates his own instruments and technique, and his success is so absolute that it would appear advisable to adhere to his method entirely.

It requires skill and attention to details, but if properly carried out it will rarely fall short of success.

Dr. R. J. Nunn, of Savannah, next presented some observations on the "Behavior of Cancer Under Mild Galvanic Currents." As it is well known that benign tumors can be absorbed by the galvanic current he resolved to tests its influence upon a cancer. The case was that of a lady aged 60 with a tumor of the left breast. First noticed tumor five years previously. It was nodular, 2½ by 2 inches in size. Axillary glands were enlarged on one side. The tumor had greatly increased in size during the two months previous to consulting Dr. Nunn. The kidneys were not affected, but she had the appearance of grave disease. Subjecting her to shock or depletion was out of the question, and the idea of an operation was given up. It was determined to try percutaneous galvanism frequently repeated. The positive was applied to the first,

with the negative to hands and also to axillary glands.

After five months of this treatment the tumor of the breast softened and reduced somewhat in size. The patient then quit and went to a faith cure for five months. When seen again by Dr. Nunn the tumor had grown to thirteen inches in diameter and was ulcerated in the centre. The left axillary glands were greatly swollen. There was a lump one inch in diameter in the right breast and the pelvic organs were involved. She despaired of relief, and died a few months later.

In reviewing this case Dr. Nunn believed that had she not interrupted treatment, the benefit would have continued. The course of the disease was very rapid after his treatment stopped, and the galvanism seemed to have held the process in check. He concluded that carcinoma can be benefited by mild galvanic currents of large diffusion frequently applied percutaneously.

Dr. Wallace stated that he had applied iodide of potassium with galvanism, twelve applications reduced the tumor, and it has now disappeared. In this case the diagnosis of cancer was made by a prominent physician, but Dr. Wallace concluded that he was mistaken, the prevailing opinion being that if a tumor disappeared under treatment, it was benign, while if the patient died it was cancer. Under this rule of diagnosis electricity could not cure a cancer. He has employed 20 to 30 ma. to produce cataphoresis of the K. I.

Dr. Herdman cited a case of cancer he had apparently cured in six months by electricity. In six months more the tumor reappeared, and then electricity did no good. It was excised and a year later the patient died of cancer of the liver. His applications were made daily.

A case of round celled sarcoma was also treated by puncture with absolutely no benefit. In two other cases where electricity failed it was proved that the growths were malignant. In all cases where tumors have been scattered by electrical currents, it was the consensus of opinion that they were not of a malignant nature.

At this point a very practical motion was made by Dr. Beavor to the effect that instrument makers be requested by the society to adopt a uniform method of attaching conducting cords to battery posts, electrodes, etc. As goods were made now, he said, each manufacturer sold a different sized tip, and some connected by screws, some by springs, etc. If a physician had bought certain parts of his outfit from one maker and part from another he could not readily use the two together.

Rheophores and electrodes certainly should all fit, no matter where purchased. The motion was carried unanimously.

Other routine business was disposed of at this juncture, including the selection of Toronto as the next meeting place, and the reports upon constant current generations and induction apparatus.

The next paper was upon the "Effects of High Frequency Discharges," by Professor Elihu Thomson, of Lynn, Mass. During the past two years Professor Thomson had made special inquiries into the cause of the harmlessness of high frequency currents. No previous explanation explained it. Currents of less than 2000 volts were fatal to life, while currents of 200,000 volts were passed through the human body with impunity. Diagrams of coils, condensers, etc., were shown to illustrate the author's remarks. He held that the true cause was physiological and due to some peculiar relation between nerve excitation and high frequency currents.

(Note—The subject has long been one of great interest and has recently had fresh attention called to it by Tesla's fearless handling of high intensities. The question is probably a simple one of amperage. High frequency currents would be deadly enough if they added quantity of current and length of oscillation to their enormous electromotive force. Exceedingly rapid oscillations may be comfortably endured by parts or all of the human framework so long as the to and fro swing of the movement is infinitely small. A sense of numbness may be occasioned as the result, and this is utilized in various local methods of treatment by mechanical vibration. If, however, the same rapidity and force of motion was joined to a to and fro swing of several inches only, the violence of the shock would utterly destroy the victim. The same principle applies alike to electric and mechanical oscillations, and renders Professor Thomson's ingenious and mysterious theory superfluous.—Ed.)

Another paper somewhat outside the routine work of electro-therapeutics, was upon "The Incandescent Electric Light or Radiant Heat Bath," by Dr. J. H.

Kellogg. He employs a cabinet apparatus with 50 or 60 incandescent lamps aranged in rows inside, the spaces between the lamps being covered with glass mirrors. As far back as 1880 Siemens showed that the electric light promotes growth in plants, and aids to ripen fruits. Similar experiments have been made by others, notably in 1889-90, at the Cornell University Agricultural Station. The following conclusions are sustained by experimental results:

1. That the electric light is, qualitatively, fairly comparable to sunlight in its power to promote protoplasmic activity.

2. That it acts as a true vital stimulus, converting night into day for the plant, and counteracting the deleterious effects of artificial conditions, such as stove heat, etc.

To determine more exactly its physiological properties as regards human beings and its value in medicine, Dr. Kellogg conducted a series of experiments which justify the following conclusions:

1. The I. E. L. bath increases the excretion of CO_2 50 per cent., and hence stimulates tissue metabolism.

2. Owing to the greatly increased activity of the skin, the urea and total chlorides are somewhat diminished.

3. Vigorous perspiration was induced at a temperature below that of the body (85 F.) in half the time required by a Turkish bath at 160 F., and the effect is independent of the temperature of the surrounding air.

4. This bath possesses many advantages over Turkish, Russian, vapor and hot air baths, chief of which are: The penetrating power of radiant heat, which is far superior to the convection heat of ordinary baths; the superior stimulating effect upon tissue metabolism; the readiness with which perspiration may be induced when desired (1 to 3 minutes); the low temperature of the surrounding air, which permits the full effects of the bath; the readiness and accuracy with which dosage may be regulated; the wider range of application which admits of the use of the bath for a tonic and sedative as well as alterative and spoliative effects.

5. The incandescent electric light is superior to the arc light for therapeutic purposes for the reason that it can be more readily and evenly distributed, and is free from injurious effects.

S. H. MONELL.

(To be continued.)

Miscellany.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

We this week report further cases of the cure of most severe cases of diphtheria apparently on the verge of a fatal result by the use of the antitoxin All the cases hitherto reported in the Journal have been in the practice of private practitioners. The remarkable curative powers of the antitoxin appear to be established here and all over the world. It is a pity that so much credit has been given to M. Roux, of Paris, and in the world-wide telegrams for merely applying a remedy which is of German origin; the hysterical excitement manifested in France, from the President downwards, does more credit to the heart than to the head. A more ridiculous and more misplaced outburst of false Chauvinism has rarely been witnessed, even among our charming and able but excitable neighbors. Sir Joseph Lister's appeal is somewhat puzzling, for only a fortnight ago he stopped an appeal of the kind with the statement that the cost of treatment per case did not exceed 9d. to 1s. 6d., which is less than the ordinary cost of existing medication.

—British Med. Journal.

WHAT WE ARE COMING TO.

(Public School, first grade, A. D. 1905.)

Teacher (to applicant for admission) —"Johnnie, have you got a certificate of vaccination for smallpox?"

"Yes, sir."

"Have you been inoculated for croup?"

"Yes, sir."

"Been treated with diphtheria serum?"

"Yes, sir."

"Had your arm scratched with cholera bacilli?"

"Yes, sir."

"Have you a written guarantee that you are proof against whooping-cough, measles, mumps, scarlet fever and old age?"

"Yes, sir."

"Have you your own private drinking cup?"

"Yes, sir."

"Do you promise not to exchange sponges with the boy next to you and never use any but your own pencil?"

"Yes, sir."

"Will you agree to have your books fumigated with sulphur, and sprinkle your clothes with chloride of lime once a week?"

"Yes, sir."

"Johnnie, you have met the first requirements of the modern sanitarians and may now climb over yonder rail, occupy an isolated aluminium seat and begin making P's and Q's as your first lesson."

Book Notes.

A SYNOPSIS OF THE PRACTICE OF MEDICINE. By William Blair Stewart, M. D. Published by E. B. Treat & Co., New York. Price $2.75.

The design of the above title book is to present a brief synopsis on the subject of general medicine, tending to condense the important elements in the larger text books. All the prominent authors have been reviewed both in text books and medical journals and the most approved methods of treatment given prominence.

A work like this is only useful for quick reference or to condense general ideas. To sit down and peruse any one subject gives one the impression that there is much left out which might have been said, and, yet, which to add would materially increase the bulkiness of the work and would destroy the prime object of conciseness.

THE PHYSICIAN'S VISITING LIST FOR 1895. P. Blakiston & Sons, Phila., Publishers.

This well-known visiting list is the first out for the new year. It is, as usual, well arranged and contains valuable dose tables in both systems, as well a the calendar for 1895.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS: A MANUAL FOR THE USE OF PHYSICIANS, SURGEONS AND STUDENTS. By Charles W. Purdy, M. D., Queen's University. In one Crown Octavo volume, 360 pages, in Extra Cloth, $2.50 net. Philadelphia: The F. A. Davis Co., Publishers.

This is a work bringing urinary analysis up to the present scientific attainment. It contains numerous plates, some of which are colored, of the microscopic appearances of the urinary sediment. Part first deals with analysis of the urine, devoting a section to general considerations, a section to composition of normal urine, one on proteids, one on carbohydrates, urinary sediments, anatomical sediments, gravel and calculus.

Part two consists of urinary diagnosis, and is divided into diseases of the urinary organs and a consideration of the urine in other diseases; also an appendix considering the examination of the urine for life insurance.

The work is one of considerable value to the active practitioner.

THE USE OF TRACTION IN THE TREATMENT OF JOINT DISEASES. By Stewart LeRoy McCurdy, A. M., M. D., Pittsburg, Pa. Reprint from the Pittsburg Medical Review for September, 1894.

NEW YORK LETTERS ON ORTHOPEDIC SURGERY. The Scope of Orthopedic Surgery, Tubercular Abscesses and Their Treatment. By Stewart LeRoy McCurdy, M. D., Dennison, Ohio.

THE ANTI-OPIUM TREATMENT OF INTESTINAL OBSTRUCTION, TYPHLITIS, APPENDICITIS, ETC., with Illustrative Cases. By Arthur DeVoe, M. D., Seattle, Wash.

PERSISTENT ALBUMINURIA AND GLYCOSURIA, WITH FREQUENT HYALINE CASTS, IN FUNCTIONAL NERVOUS DISEASES. By Landon Carter Gray, M. D., of New York. Reprint from the American Journal of the Medical Sciences, October, 1894.

Prescriptions.

A RHUBARB DRAUGHT.

		Gram.
R.	Pulveris Rhei gr. xxx.....	2
	Sodii Bicarbonatis gr. xx....	1|3
	Spiritus Myristicae m. xx.....	1|3
	Syrupi Zingiberis dr.i.....	4
	Aquae Floris Aurantii ad oz 1½	45

Misce et fiat haustus.

To be taken at bedtime.

FOR INTERTRIGO IN CHILDREN.

		Gram.
R.	Liquoris Plumbi Subacetatis dr. iv.....	16
	Acidi Borici gr. xx.....	1|3
	Extracti Hamamelis Destillati dr. ij.....	8
	Lactis Recentis ad oz. x.....310	

Misce et fiat applicatio.

To be applied on a pad of absorbent cotton-wool to the affected parts.

AN ALKALINE CHALYBEATE TONIC.

		Gram.
R.	Ammonii Carbonatis gr. iij ..	18
	Ferri Tartarati gr. v.....	30
	Syrupi Zingiberis oz. i.....	4
	Infusi Cascarillae ad dr. i.....	30

Misce et fiat mistura.

Two tablespoonfuls to be taken three times daily after meals.

AN ANTISPASMODIC AND CARMINATIVE DRAUHT.

		Gram.
R.	Spiritus Ammoniae Foetidi m. xxx.....	2
	Spiritus Ammoniae Aromatici m. xxx	2
	Syrupi Floris Aurantii dr. i...	4
	Aquae Camphorae ad oz. i....	30

Misce et fiat haustus.

To be given three or four times daily, as required.

—Practitioner.